REMARKS/ARGUMENTS

1. Priority

Applicants thank the Examiner for confirming the request for Foreign priority based on European Application No. 03250617.2 filed 31 January 2003. Applicants will submit to Examiner a certified copy as soon as one is received.

2. Drawings

The Examiner has not indicated in the accompanying form PTO-948 that the formal drawings previously submitted have been approved. Applicants hereby respectfully request approval.

3. § 112 Rejections

Claim 5 stands rejected under section 112. Claim 5 has been amended herein as suggested by the Examiner. The claim as amended is believed to in allowable form.

4. § 103 Rejections

Claims1-12 stand rejected under 35 U.S.C. § 103(a) as being unpatentable for obviousness over Healey, et al "Spectral slicing WDM-PON using wavelength-seeded reflective SOAs", ("Healey, et al") in view of Healey, US Patent Publication No. US2003/0007207, ("Healy US").

Claims 1-9 and 11

Claim 1 recites:

> An optical network comprising a central source providing light in a plurality of spaced wavelength bands and including variable-gain optical amplifiers enabling the relative intensity of light in respective wavelength bands to be varied; plural distributed terminals operable to modulate and return received light in any of the said wavelength bands; and a wavelength-routed network receiving light in all the said wavelength bands from the central source and routing each wavelength band to a respective one of the terminals.

Claim 11, while a method claim, recites similarly:

> A method of controlling an optical network comprising forming the network with: a central source providing light in a plurality of spaced wavelength bands and including variable-gain optical amplifiers enabling the relative intensity of light in respective wavelength bands to be varied; plural distributed terminals operable to modulate and return received light in any of the said wavelength bands; and a wavelength-routed network receiving light in all the said wavelength bands from the central source and routing each wavelength band to a respective one of the terminals and adjusting the said variable optical amplifiers individually to determine the level of light reaching the respective terminals.

As the Examiner has noted, Healy et al does not disclose the "central source . . . including variable-gain optical amplifiers enabling the relative intensity of light in respective wavelength bands to be varied." The Examiner relies upon the disclosure of Healy US to supplement Healy et al, to teach the recited source. Applicants respectfully submit that Healy US does not teach or disclose the source as recited in claim 1, and that the combination of the teachings of Healy et al and Healy US do not render the network recited in claims 1 and 11 unpatentable.

According to Healy et al, "[a]n erbium doped amplifier (EDFA) was used as a centralised broadband source of un-polarised amplified spontaneous emission" (page 2). The corresponding source, in Healy US, is the "optical source for generating broadband radiation" (paragraph 10) which is "[p]referably . . . an erbium-doped fiber amplifier" (paragraph 17). The source (that is, the amplifier) is represented as "erbium doped amplifier 1" in FIG. 1 of Healy US (paragraph 34) and in FIG. 2 (paragraph 36). Thus Healy US uses the same source shown in Healy et al, and does not suggest or teach the source recited in claim 1 and 11.

While FIG. 1 of Healy US shows "semiconductor optical amplifiers 13" and FIG. 2 of Healy US shows "semiconductor optical amplifiers 15," in each case these are disclosed as modulators, used to impress a signal on the light from the source (paragraphs 25-36), and correspond to the "reflective SOA" modulators of Figure 2 in Healy et al, not to the EDFA source. The system shown in Figure 2 of Healy et al already has a modulator for each channel. One of ordinary skill would not be motivated to add modulators such as those of Healy US, which would be redundant. Conversely, Healy

US also provides a modulator for every channel in the form of SOAs as part of a transmitter. One of ordinary skill would not be motivated to add modulators such as those of Healy et al, which would be redundant. For at least these reasons, Applicants respectfully submit that Healy et al alone or together with Healy US does not disclose the source and the device or method as a whole as recited in claims 1 and 11, and that claim 1, and claims 2-9 which depend therefrom, together with claim 11, are allowable.

Claims 10 and 12

Claim 10 recites:

> A method of controlling an optical network comprising forming the network with: a central source providing light in a plurality of spaced wavelength bands and including variable-gain optical amplifiers enabling the relative intensity of light in respective wavelength bands to be varied; plural distributed terminals operable to modulate and return received light in any of the said wavelength bands; and a wavelength-routed network receiving light in all the said wavelength bands from the central source and routing each wavelength band to a respective one of the terminals and adjusting the said variable optical amplifiers individually to determine the level of light reaching the respective terminals.

For at least the reasons explained with respect to claim 1, Applicants respectfully submit that "forming the network with . . . a central source providing light in a plurality of spaced wavelength bands and including variable-gain optical amplifiers enabling the relative intensity of light in respective wavelength bands to be varied" and "adjusting the said variable optical amplifiers individually to determine the level of light reaching the respective terminals" as recited in claim 10 are not disclosed in Healy US or in Healy et al combined with Healy US. Claim 12 similarly recites "forming the network with . . . a central source providing light in a plurality of spaced wavelength bands, the relative intensity of light in respective said wavelength bands being individually variable" and "adjusting the relative intensity of light in respective said wavelength bands individually to determine the level of light reaching the respective terminals." Accordingly, claims 10 and 12 are believed to be allowable.

5. Conclusion

Claims 1 – 12 remain in this application. Claim 5 has been amended herein.

Based upon the above amendments, remarks, and papers of records, applicant believes the pending claims of the above-captioned application are in allowable form and patentable over the prior art of record. Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Applicant believes that a three (3) month extension of time is necessary to make this Reply timely. Should applicant be in error, applicant respectfully requests that the Office grant such time extension pursuant to 37 C.F.R. § 1.136(a) as necessary to make this Reply timely, and hereby authorizes the Office to charge any necessary fee or surcharge with respect to said time extension to the deposit account of the undersigned firm of attorneys, Deposit Account 03-3325.

Please direct any questions or comments to Greg Bean at 607-974-2431.

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Date

Respectfully submitted,
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CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8: I hereby certify that this paper and any papers referred to herein are being deposited with the U.S. Postal Service, as first class mail, postage prepaid, addressed to the Commissioner of Patents, Alexandria, VA 22313-1450 on 1 Aug 07

Gregory V. Bean 1 August 2007